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EXAMINER

MULLIS, JEFFREY C

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1796

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/501,701	Applicant(s) NOSKER ET AL.	
	Examiner Jeffrey C. Mullis	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 January 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4,7-9 and 11-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4,7-9 and 11-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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Claims 1-4, 7-9 and 11-19 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specification as filed does not broadly disclose that HDPE and ABS have a modulus of greater than the additive contribution of each in that applicants specification refers to Figure 3 which shows that most of the composition range studied exhibited a modulus which were less than additive and furthermore given that the high levels of ABS studied exhibited negative deviation from the law of averages it might be concluded that higher levels of ABS than those studied also would exhibit a modulus lower than expected based on the law of averages. The limitation that HDPE/ABS blends exhibit greater modulus than the additive contribution of each polymer is therefore new matter.

Claims 1-4, 7-9 and 11-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Applicants claims recite numerous instances of "or" starting at line 2 of claim 1 without indicating what the various recited polymers are alternatives to. For instance "or a mixture of ABS and PC" could be viewed as indicating that the macromolecular components of the claims would be met by a mixture of only ABS and PC or that ABS and PC are alternatives to ABS (although it is not clear why the claims would be drafted to recite a mixture of ABS and PC given that

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they already recite ABS and are open to other materials such as PC due to the word "comprising"). The phrase "ABS, PC" in the penultimate line of claim 1 is unclear as to whether ABS is to be used in combination with PC and as an alternative.

The term "lumber" as generally used in the art pertains to wood and it is therefore unclear what applicants intend by "lumber" as it pertains to plastic blends.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4, 7-9 and 11-17 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Haddock (US 5,989,683).

Patentees disclose that ABS/PC blends are commercially available under the Tradenames PULSE 1370 and CYCOLOYC 1110 which has modulus in Tables 1 and 2 similar or better than applicants Tables III and VI and therefore

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would appear to have applicants claimed characteristics. With re to applicants “lumber” of instant claim 12, this term only appears to apply to appearance, a characteristic and is therefore assumed to be inherent in the patented material.

When the reference discloses all the limitations of a claim except a property or function, and the Examiner cannot determine whether or not the reference inherently possesses properties which anticipate or render obvious the claimed invention, basis exists for shifting the burden of proof to applicant. Note In re Fitzgerald et al. 619 F. 2d 67, 70, 205 USPQ 594, 596, (CCPA 1980). See MPEP § 2112-2112.02.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Haddock, cited above.

Patentees do not disclose the use of continuous extrusion. However, applicants admit that continuous extrusion was known at the time of the invention to be useful for fabrication of thermoplastics (paragraph 22 of applicants published application). Hence use of continuous extrusion in the process of patentees would have been obvious to a practitioner having an ordinary skill in the art, motivated by the need of patentees to fabricate their thermoplastics and by a known method for fabricating thermoplastics absent any showing of uprising or unexpected results.

Claims 1, 4-9 and 11-19 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Priedeman, JR. (US 2002/0017743).

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Patentees disclose the use of a commercially available ABS/PC blend in example 2 having a melt flow of 10-20 g/10 min. While the measurement temperature is reported as 280, lowering the temperature of measurement to 190 degrees would have to lower the MFR by more than a factor of 10 and therefore the commercially available CYCOLOY reasonably appears inherently have a MFR of greater than about 1 as required by the claims. With re to applicants "lumber" of instant claim 12, this term only appears to apply to appearance, a characteristic and is therefore assumed to be inherent in the patented material. With re to "railroad tie", patentees disclose "rods" in paragraph 39 and as rods could reasonably be used to connect railroad tracks (at least toy ones), the limitations of claim 13 are met. Similarly, marine pilings are often tubular as are rods. Continuous extrusion is disclosed in paragraph 22.

When the reference discloses all the limitations of a claim except a property or function, and the Examiner cannot determine whether or not the reference inherently possesses properties which anticipate or render obvious the claimed invention, basis exists for shifting the burden of proof to applicant. Note In re Fitzgerald et al. 619 F. 2d 67, 70, 205 USPQ 594, 596, (CCPA 1980). See MPEP § 2112-2112.02.

Claims 1, 8, 9, 11, 12, 15, 17 and 18 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Farah (WO 96/07703).

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Farah discloses a composition which may contain ethylene polymers having a melt flow of 0.01 g/10 min (page 9, lines 28-30) which is combined with polycarbonate having a melt flow rate of 3-150 (page 6, lines 28-35), which, while measured at a higher temperature has substantially higher flow rate and would therefore reasonably have applicants flow rate at 190 degrees centigrade.

When the reference discloses all the limitations of a claim except a property or function, and the Examiner cannot determine whether or not the reference inherently possesses properties which anticipate or render obvious the claimed invention, basis exists for shifting the burden of proof to applicant. Note In re Fitzgerald et al. 619 F. 2d 67, 70, 205 USPQ 594, 596, (CCPA 1980). See MPEP § 2112-2112.02.

Claims 1, 7-9 and 11-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Farah, cited above in view of March (US 5,937,521) or Bayer (US 6,001,491).

Bayer discloses that plastics may be converted to marine pilings (abstract) while March discloses production of either marine pilings or railroad ties from plastics (column 7, lines 29-40).

The examiner may be incorrect re the materials of patentees having applicants melt flow rates for all embodiments but to be certain applicants polyethylene flow rates are explicitly disclosed and patentees lowest molecular weight polycarbonate is very low molecular weight with flow rate of 150 explicitly disclosed and there therefore appears little doubt that materials with applicants characteristic melt flow rates can be used by patentees. Also while no examples

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exist in the patent using applicants combination of materials exist (assuming that picking and choosing from patentees' ranges of MFR is needed and combining such disclosures due to the fact that of patentees' two MFR ranges, neither one is entirely encompassed by the claimed MFR range), selection of applicants features by choosing from the various disclosures of the patent and combining them would have been obvious to a practitioner having an ordinary skill in the art at the time of the invention in the expectation of adequate results absent any showing of surprising or unexpected results.

With re to production of marine pilings or railroad ties production of such from the composition of the primary reference would have been obvious to a practitioner having an ordinary skill in the art at the time of the invention in view of the secondary references motivated to increase the usefulness of Farahs' product absent any showing of surprising or unexpected result.

Claims 1-4, 7-9 and 11-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sperk (US 5,334,647) in view of March (US 5,937,521) or Bayer (US 6,001,491)..

Patentees disclose a composition having a high viscosity component and a low viscosity component with the difference in viscosities may be as much as a factor of 100 (column 3, lines 49-67). The components may include applicants polymers in patent claim 11. Ultrahigh molecular weight polyethylene may be used at column 12, lines 20-25, a material those skilled in the art would assume would be encompassed by applicants MFR while the MFR of the polycarbonate may be 60 at column 9, lines 15-20. The components are immiscible at column 2,

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lines 25-30. The material may be injection molded at the paragraph bridging columns 14 and 15. While no specific examples with all of applicants features in combination are present in the patent , choice of such by selecting from the various disclosures of the patent would have been obvious to a practitioner having an ordinary skill in the art at the time of the invention in the expectation of adequate results absent any showing of surprising or unexpected results.

With re to production of marine pilings or railroad ties production of such from the composition of the primary reference would have been obvious to a practitioner having an ordinary skill in the art at the time of the invention in view of the secondary references motivated to increase the usefulness of Sperks' product absent any showing of surprising or unexpected result.

Claims 1, 3, 7-9, 11-15 and 18-19 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Mekhilef et al. , Weld Lines in Injection-Moulded...,” .

The reference discloses HDPE/PC compositions having applicants melt flow rate in Table 1 and shapes which could be said to be in the shape of lumber or marine pilings etc in Figure 3 on page 2036.

Claims 12-14, 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mekhilef, in view of March (US 5,937,521) or Bayer (US 6,001,491).

Applicants may not agree that production of marine pilings or railroad ties is disclosed by the primary reference and does not disclose use of (continuous)

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extrusion, however, production of such from the composition of the primary reference would have been obvious to a practitioner having an ordinary skill in the art at the time of the invention in view of the secondary references, motivated to increase the usefulness of the primary references product and motivated to use the continuous extrusion by the disclosure of the secondary references that the desired articles (marine pilings and railroad ties) can be made by these methods absent any showing of surprising or unexpected result.

The declaration under 37 CFR 1.132 filed 1-16-08 is insufficient to overcome the rejection of claims 1-4, 7-9 and 11-19 based upon the references relied upon in the Office action of 7-16-07 as set forth in the last Office action because: applicants claims are not limited to HDPE blends (it is not the position of the examiner that the SLEP of '703 encompasses HDPE) and recite blends such as "ABS and PC". Haddock '683 discloses use of PETRATHENE LM series believed to be HDPE (see column 7, lines 43-49 and column 8, lines 6-13 of Cai (US 5,814,264) which refers to PETROTHENE) while Sperks specifically refers to "high density" polyethylene. Only instant claims 2 and 4 clearly require HDPE and the only primary references not disclosing HDPE, Friedman and Farah are not relied upon to reject claims 2-4. With regard to the characteristic newly

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introduced in the last 2 lines of claim 1, it is assumed that applicants characteristic is inherent where applicants limitations aside from characteristics are explicitly shown. With regard to Sperk, patentees utilize specifically two polymer components with substantially different viscosities and high shear blending to avoid the poor mechanical properties generally encountered with immiscible blends and for this reason those skilled in the art would assume that applicants characteristics would result from use of Sperks process.

Applicant's arguments filed 1-16-08 have been fully considered but they are not persuasive. It is assumed that the 26 page patent submitted on 10-24 2005 is CA 2199487 despite the presence of the cover of WO '703, relied upon. It has been considered. If applicants wish for Ca '487 to be printed on the patent they will have to resubmit a copy of the uninitialed IDS which was originally submitted listing Ca '487. No 1.17(p) fee will be needed.

Applicants Figures 3-5 only show data for blends containing HDPE. and even here only shows positive deviation for the law of blends for polycarbonate containing HDPE blends.

Applicants' arguments rely on the above declaration or repeat arguments found in the declaration. However, the defects in applicants' declaration are set out above.

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US 2007/0082995 and 2002/0099160, previously cited of interest disclose MFR data at paragraphs 92 and 158 respectively for various polycarbonates.

Any inquiry concerning this communication should be directed to Jeffrey C. Mullis at telephone number 571 272 1075.

Jeffrey C. Mullis
Primary Examiner
Art Unit 1711

JCM

4-2-08

/Jeffrey C. Mullis/

Primary Examiner, Art Unit 1796